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North 40 Scrub Management Project

National Forests in Florida, Ocala National Forest Service

Marion County, Florida

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CHAPTER 1

1.0 INTRODUCTION AND PURPOSE AND NEED

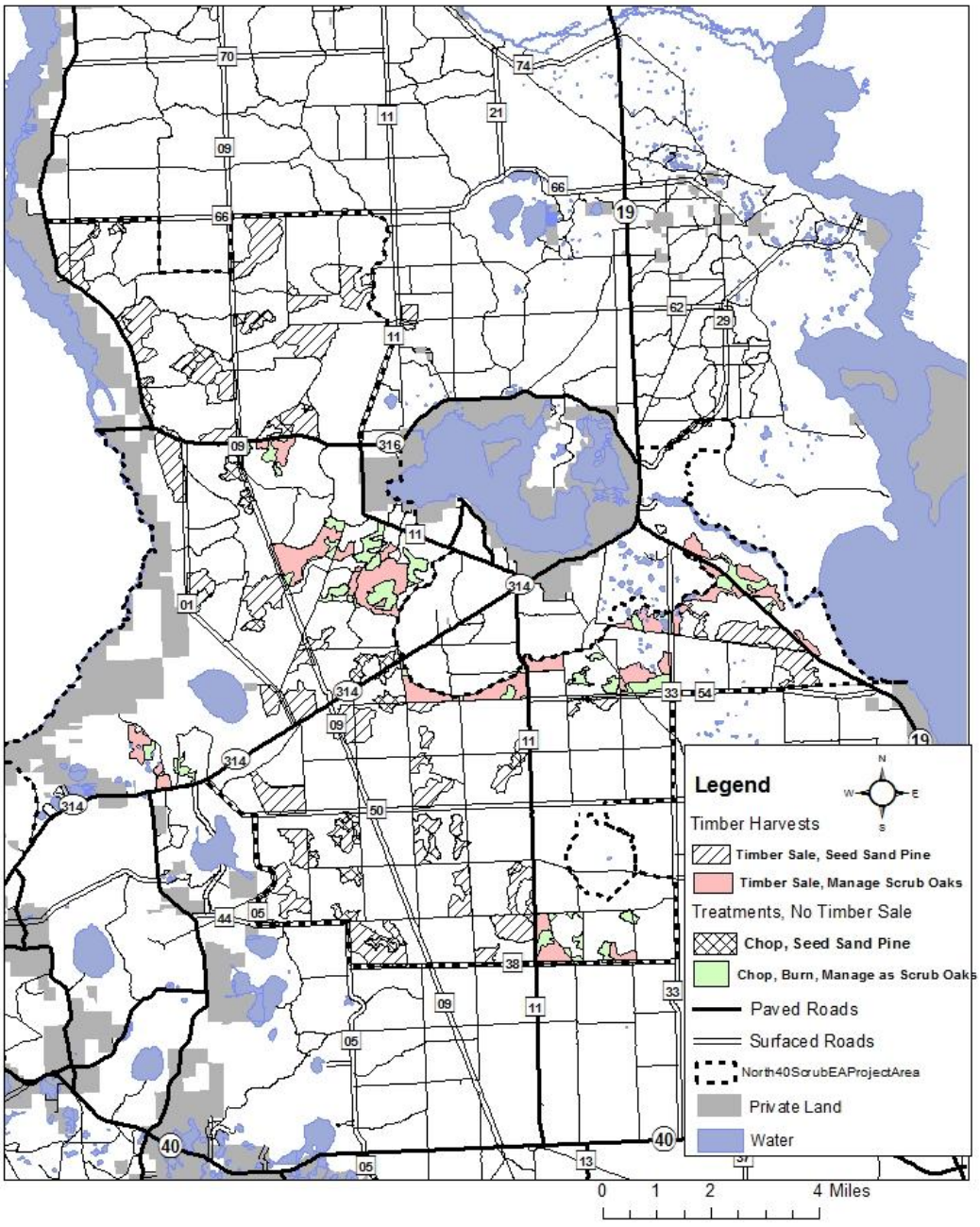
1.1 Proposed Action

The United States Department of Agriculture, Forest Service (USFS), proposes a project that would authorize the following land management activities:

- Create about 12,500 acres of habitat for the Florida scrub-jay through timber sales, mechanical treatments, and prescribed burning. Activities would include commercial harvesting sand pine and crooked wood, mechanical treatments, prescribed burning, and seeding sand pine (see Figure 1).Other related actions would be road reconstruction and maintenance (to support timber sale activities), road decommissioning as needed in project area, regeneration checks (to assess sand pine regeneration success), and scrub-jay monitoring (to monitor effects of activities on scrub-jays).

All activities would occur on the Ocala National Forest (ONF) in Marion County on the Lake George Ranger District. More specific acreages, mileages, and treatment breakdowns are described below.

Figure 1. Proposed Timber Harvest areas and Treatments



1.2 Purpose and Need

Create scrub openings by sand pine harvesting and mechanical/fire treatments:
The ONF provides habitat for the largest remaining population of Florida scrub-jays in the world. Under current ecosystem management practices this population has been generally stable.However, this project is needed to meet the continued habitat needs of Florida scrub-jays on the ONFand contribute to the goal of the species recovery plan currently under revision by the US Fish and Wildlife Service. While also contributing to Forest goal of increasing the average opening size in sand pine scrub ecosystem for scrub-jay habitat, and Forest-wide goals 6 and 9 in the Forest Plan. Stands are groups of similar types, ages, and conditions of trees. The stands proposed for treatment were selected to provide opportunities for scrub-jay colonization from nearby occupied sites and to combine stands to make larger openings. Also, stands with old or damaged sand pine were selected for harvest as trees in this condition start to die off in increasing numbers so that in five years there may not be enough sand pine trees left to sustain a commercial harvest.

The current suitable scrub-jay habitat is defined as stands of sand pine or scrub oak aged 3-12 years. Currently, on the ONF, there are41,362 acres in suitable scrub-jay habitat. The Forestwide Objective #9 in the Land and Resource Management Plan (LRMP) for National Forests in Florida are to maintain at least 45,000 to 55,000 acres of Florida scrub-jay habitat.

Table 1 summarizes scrub projects during the last ten years and compares what has been accomplished with what the goal was in the Forest Plan. A landscape scale assessment of scrub habitat on the ONF was completed in 2015 and is available on the project website.

Table 1. Decisions during the last 10 year period that authorized activities that have created or will create scrub-jay habitat when implemented.

DN* date	Project Name	Acreage
2/07	Scrub-jay 04	2,199
1/08	Big Scrub	2,387
9/08	Scrub-jay Pipeline	3,087
10/09	South Ocala Scrub	2,476
4/10	Scrub-jay Management Area	995
4/11	Hog Valley	3,425
12/11	Florida scrub-jay chopping – no sale	3,411
3/13	19&40 Scrub	5,649
7/14	Central Scrub EA	6,385
On-going	Forest Health EA	2,469
	TOTAL	**32,483**

*DN = Decision Notice, the formal notice when a decision is made by the authorized federal decision maker known as the "Responsible Official".

The Forestwide Objective #19 in Forest Plan is to regenerate between 39,000 and 41,000 acres or about 4,000 acres per year by timber harvesting. As noted in Table 1, 32,483 acres of new scrub jay habitat was created though only about 28,322 acres were done by timber harvesting, which averages just 2,832 acres per year. Though Florida scrub-jay populations are considered stable it has been largely because of mechanical treatments and fire events; both prescribed fire and wildfires that have occurred in scrub. ONF biologists predict that unless we reverse this declining trend in creating new scrub openings through timber harvesting, scrub-jay populations could decline.

This project will create about 12,500 acres of new scrub-jay habitat mostly through timber harvesting over the next several years. A map of proposed harvesting and other treatment areas is shown in Figure 1.

Achieve Desired Condition in Forest Plan
The LRMP was completed in 1999 and has been amended 12 times. A copy of the LMRP and its amendments is available at http://www.fs.usda.gov/land/florida/landmanagement. This document established Forest Plan Management Area (MA) goals, forest-wide goals, and forest-wide objectives many of which that would be achieved through implementation of this proposed project. A listing of these goals and objectives is listed in Appendix A.

1.3 Decision to Be Made

The Responsible Official (District Ranger) will decide whether to proceed with the Proposed Action.
If a determination is made that the impact is not significant, then a "Finding of No Significant Impact" (FONSI) would be prepared and a Decision Notice would document the decision of the District Ranger.

1.4 Public involvement

This draft EA is subject to administrative review procedures in 36 CFR 218 (available on the website), including a 30-day public notice and comment period. Comments were requested on the proposed action during a public scoping period from January 24, 2017 toFebruary 22, 2017. No public comments were receive during this time frame; therefore, no objection period is required.

CHAPTER 2

2.0 ALTERNATIVES

Forest Service NEPA regulations state that "The EA shall briefly describe the proposed action and alternative(s) that meet the need for action. No specific number of alternatives is required or prescribed" (36 CFR 220.7(b)(2)). For this project, the USFS developed only the proposed action, as modified through the course of the project in response to public suggestions and internal discussions, with a no action alternative of continuing current management.

2.1 Alternatives Considered But Not Developed and/or Analyzed

In the past, other alternatives were considered to meet the project's purpose to create scrub-jay habitat.

a. No timber sales - mechanical treatments only –Because large sand pine trees are present on most of the sites, mechanical treatment would have to be done by large expensive mowers. Without prescribed burning the sites after treatment, the large amount of fuel created would create a potentially hazardous situation. Additionally, the cost of the treatment would be extremely high and under current budget constraints, this treatment would not be practical.

b. No timber sales - prescribed burning only - Stands with larger sand pines could be burned using a stand replacement burn method. Under current staffing levels and the short burning season for safe execution of stand replacement burning, it would take over ten years to carry out this project. As discussed in Chapter 1, Purpose and Need, the Forest Service needs to complete this project within 1-2 years to meet the habitat needs of the Florida scrub-jay. Additionally, shifting resources to burn these areas would take away from our ability to burn scrub jay management areas and other scrub that requires the same weather conditions. Cost of treatment would be much higher than allowing timber sales to create openings.

These alternatives were not developed because though they met the project purpose to create scrub jay habitat, they did not meet other goals and objectives of the LMRP. Additionally, a. would be prohibitively expensive and the cost to implement b. would still greatly exceed the cost of implementing the proposed alternative.

Amendment 12 to the LMRPwas finalized March 6, 2017. That amendment created about 52,000 acres of additional scrub-jay management areas where open scrub will be created and maintained following a final timber harvest. Development of this amendment has further precluded our consideration of alternatives a and b described above.

2.2 Alternative Considered

Alternative 1–Proposed Action, see Maps in Figures 1, 2 and 3.

Table 2. Proposed Actions

Acres	Treatments to Create Scrub-jay Habitat			Comments
~6,900	Harvest sand pine	After harvest, treat by roller drum choppers and/or prescribe burn	Seed sand pine	
~2,640	Harvest sand pine	After harvest, prescribe burn. Chopping may be used to facilitate burn.	Manage as scrub oak*	After treatments, stands would be part of a regular prescribe burn unit and managed with fire
~1,470	No harvest	Treat with roller drum choppers and/or prescribe burn	Manage as scrub oak*	After treatments, stands would be part of a regular prescribe burn unit and managed with fire
~1,280	No harvest	Treat with roller drum choppers and/or prescribe burn	Seed sand pine	Not enough sand pine present for a commercial harvest

*new Scrub Jay Management Areas as proposed per Forest Plan Amendment #12				

Miles	**Road Work**-to support harvesting
93	Road Maintenance—which includes re-surfacing, cleaning and re-shaping existing ditches, clearing existing travel-way
1.25	Construct temporary road to support harvesting. After harvest, road is closed to use and obliterated.

2.3 Project Design Criteria

The follow site-specific project design criteria minimize adverse effects.

WATER:

1. Water and wetlands are protected by S&G WA-1 (LRMP, p. 3-24) and incorporates Best Management Practices (State of Florida guidelines). There are small ponds > 2 acres in or adjacent to three stands proposed for timber harvest. Harvesting and chopping activity in C45st8, C45st26 and C105st16would be buffered from these pondsby at least 35 feet. Appendix B shows specific protection requirements for each water/wetland impacted.

WILDLIFE AND PLANTS:

2. To maximize the potential for beneficial effects and minimize the potential for adverse effects on Threatened, Endangered and Sensitive (TES) plant and animal species,the timber sale administrator would coordinate with the botanist or wildlife biologist about the placement of log landings and skid trails.

WILDLIFE:

3. To reduce the risk of destroying reptile eggs, roller-chopped stands that are seeded and fail to meet the sand pine lower stocking level of 200 seedlings per acre would not be re-chopped.
4. No roller-chopping activities would occur from May to August to prevent destruction of the eggs or young of ground-nesting birds and herpetofauna.
5. To reduce the potential of adversely affecting eastern indigo snakes, all contractors would be educated on their identification, status, felony charges that would result from their take (16 USC, Endangered Species Act), and federal law against killing, molesting, or possessing wildlife without a permit [36 CFR 261.8(a)].
6. There are several known actively occupied striped newt ponds in C45st26. Habitat of striped newt ponds would be protected from roller-drum chopping within 35 feet of the occupied wetland margin. If actively occupied striped newt ponds are discovered in other parts of the project area in scrub habitat, the potential habitat of any terrestrial striped newts would also be protected from roller-chopping with a 35-foot radius buffer from the occupied wetland margin.
7. Field personnel and contractors would be educated in gopher tortoise burrow identification if new to the ONF. Log landings and skid trails would not be located within 25 feet of known gopher tortoise burrows. Equipment operators would be instructed to maintain a 25 foot distance during operations when previously unknown burrows are encountered.

PLANTS:

8. Minimize the potential for introduction and spread of non-native invasive species (NNIS) such as cogon grass, Japanese climbing fern, and Japanese mimosa on the ONF as a result of timber sales or other mechanical activities. Cogon grass and Japanese climbing fern are present in the project area. Known and new NNIS locations would be documented and treated prior to timber harvest. All equipment would be washed according to timber contract specifications (BT6.35) before entering the ONF. If site preparation equipment may be transported on a road right-of-way, a Forest Service official would inspect the route. Coordination would also take place to prevent the spread of NNIS during road reconstruction and maintenance.

HERITAGE:

9. The ONF Archeologist would locate and protect heritage resource sites on the ground prior to ground disturbing activity as discussed in the Management Summary for FY-16, Heritage Resources Report (Appendix F).

PRESCRIBED FIRE:

10. Prescribed burning would be done within Regional and Forest standards, and within parameters described in the EA for Prescribed Burning on the ONF (2006). Parameters include that during prescribed burning operations, suppressant foam will not be applied within wetland ecotones when wetlands are holding water, and foaming agent containers will not be rinsed in wetlands.
11. Emphasize prescribed burning after harvesting to enhance habitat for TES species.

RECREATION:

12. Promote public safety and protect resources adjacent to Horse Trails and motorized trails Compartments 23, 24, 25, 26, 27, 28, 29, 38, 41, 42, 45, 48, 49, 50, 55, 58 and 97 by using restrictions and cleanup activities as needed. Safety signs would be posted. Trails would usually remain open during timber harvest, site preparation and reforestation treatments, but would be subject to temporary relocation or closure as needed. Timber harvest may be prohibited on weekends, and may be restricted to periods of low trail usage. Trees with trail blazes on them would either be left or replaced with a post and sign. To better define OHV trails during site preparation, roller chopping would be excluded from a 35 foot-wide strip along the trails.
13. Stumps from timber harvest that are within three feet of motorized trail tread can be hazards to safe OHV operation. Timber sale staff will coordinate with recreation staff at the time of timber sales to identify potential hazard trees or stumps and develop a plan to cut or otherwise remove them.
14. Promote public information and education; such as placing kiosks and signs in key locations, public education programs, outreach, and website development, to interpret large scrub openings and scrub-jay management. Some large openings may require leaving visual buffers of young scrub oaks in key locations to partially screen portions of openings from view.
15. Promote scenic goals along paved roads, by using a 100-foot slash treatment zone in harvest units that are adjacent to paved roads in Compartments 25, 26, 27, 29, 38, 49, 50, 51, 66, 97, 105 and 106.
16. Cut material (excluding timber products) generated from timber harvesting and roller-chopping would be used to block unauthorized travel routes and system roads planned for decommissioning that occur in or adjacent to the treatment areas.

2.4Changes Made to proposed action from the Draft EA

The 90 acres of the Sand Pine Seed Orchard planned for harvest and restored back to Longleaf Pine was dropped from the North 40 Srcub ManagmentProject. After a meeting with the Regional Geneticist Barbara Crane it was decicded to retain the Seed Orchard for a furture seed scoure for Sand Pine and also plant Longleaf within the Seed Orchard for furture seed production. The area being dropped from the project and will remain as MA 2.3(Genetic Rescoure Management Area) (1999 LRMP page 4-20).

CHAPTER 3

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Background:
The almost 400,000-acre Ocala National Forest is divided for management purposes into about 300 compartments. The resource analysis area for the Central scrub project included about 60,000 forested acres in Compartments (C) 23, 24, 25, 26, 27, 28, 29, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50, 51, 55, 56, 58, 59, 66, 67, 68, 74, 97, 101, 105, and 106.

The forest cover of the analysis area is predominantly sand pine and scrub oak in most of the project area. The Proposed Action detailed above (Table 2) is located within 31compartments.

Over the last 10 years resource activities within the analysis area have included: hurricane salvage, timber harvesting, prescribed burning, site preparation, sand pine reforestation, scrub oak regeneration, road reconstruction and maintenance, road designations, road closures, maintenance of non-motorized trails, and establishment and maintenance of motorized trails.

Spatial and temporal bounds were established for the effects analysis of each resource, by estimating how far away and how long effects may persist.The alternatives were considered for their potential to directly and/or indirectly affect resources. Direct effects occur at the same time and place as an action. Indirect effects occur at a later time and/or at a different location. The cumulative effects analysis evaluated direct and indirect effects that may overlap within this project, as well as those that may overlap with the effects of other projects (past, present, and reasonably foreseeable) within the same spatial and temporal bounds. This EA and the appended Biological Assessments (BAs) and Evaluations (BEs)were based on a review of relevant scientific information in order to consider the best available science. This section summarizes the anticipated effects.

3.1 Physical Environment –

3.1.1 Soil, Water and Air

3.1.1.1 Affected Environment

Water - Lakes on the ONF are usually clear (though sometimes darkened by tannic acid from surrounding swamps), acidic, and naturally low in phosphorus. The ONF is bounded by the St. Johns and Ocklawaha rivers and has over 600 lakes and ponds. Sinkhole ponds are common. This project falls within the Upper St. Johns (Hydrologic Unit Code 03080101) watershed.The only water resources within the project area are located in C45 and 105 in the northeast part of the project area and C51 in the west central part of the project area. The largest pond affected by proposed activities is twelve acres in size. The spatial scale for the water quality analysis was set as the stands of the action alternatives and nearby adjacent water bodies, as well as the haul roads and adjacent few feet. The temporal scale was set at three years.

Soils – The vast majority of the analysis area has soil in the Astatula series. This soil is low in fertility, clay and organic matter, and is excessively drained, and not prone to compaction. Soils are described in the FEIS (p. 3-6).A comparison of soil loss and sediment yield rates with tolerable soil loss rates shows that soil loss from NFF lands falls within acceptable limits. The spatial scale for the soil analysis was set as the stands of the action alternatives, as well as the haul roads and adjacent few feet. The temporal scale was set at three years, because most of the actions that affect soils would take place within this period.

Air -Air quality in the forest is affected slightly by industry, motorized vehicle use, weather, and smoke from prescribed fire, wildfire, and debris burning by forest residents. The Forest Service works with state and federal regulatory agencies to assure air quality meets the National Ambient Air Quality Standards set by EPA. The state of Florida responded to the Clean Air Act with regulations that assure prescribed burning is in compliance with air quality standards. See the Forest Plan FEIS (pp. 3-5 and 3-6), and the NFF 2009 Annual Monitoring and Evaluation

Report for information on air quality. See (Long, 1999) and (Monroe, 1999) for information on prescribed burning and air quality. The spatial scale for the air quality analysis was set as the north-central Florida counties of Lake, Marion, Putnam, and Volusia. The temporal scale was set at three years, because the actions that affect air quality would take place within this period.

3.1.1.2. Direct and Indirect Effects for Proposed Action, -- Alternative 1

Water: Sediment may be produced during **timber harvest** and**chopping** treatments. C45 stand 8 and 26 and C105 stand 16 are the only stands near water resources larger than 2 acres (see Appendix B). These stands would be protected from harvesting and chopping by project design feature 1 and the following Forest Plan Standards and Guidelines (S&Gs): FI-7, FI-8, WA-1, and WA-2. Using these protection standards, no effects are anticipated on the water resources.All other stands have no water bodies within or adjacent to their boundaries.

Light intensity **prescribed burning** would cause little or no erosion. Moderate intensity burning is capable of causing minor erosion, but soil movement out of the burned areas to water is not expected. **Road maintenance** would have a long-term beneficial effect of erosion prevention. Road surfacing material may be moved within the immediate construction area, but would not likely contribute sediment to wetlands or waterways due to the distance from the roads.

Based on many years of experience with similar actions on similar sites, no adverse effects on water resources are expected.

Soils: **Timber harvesting** activities such as felling, skidding, and piling (especially at log landings) would cause some soil movement and increase the erosion potential. Movement is expected to be slight as soils impacted are sands and have little slope. Compaction risk is low on these coarse sands where harvesting is proposed. Effects are short-lived and plant cover is re-established within a year. No effect is anticipated to overall soil fertility nor are any changes in nutrient cycling anticipated. **Mechanical treatment by roller chopping** would cause some soil movement and minor erosion.

The blades do not turn the soil or alter the soil layers, but slice into the ground under the weight of the rolling drum. This method would not cause nutrient displacement or compaction. Chopping incorporates biomass into the soil for better nutrient release. Effects are noticeable for about 3-6 years. Overall risk to soil productivity is minimal. Overall risk to soil productivity is minimal.

Prescribed burning has both favorable and unfavorable effects on soil depending on the type and intensity of the burn. Favorable effects are the temporarily enhanced nutrient availability and phosphorus cycling. Adverse effects are caused directly by soil heating, soil erosion, and nutrient loss. Soil erosion and nutrient leaching occur indirectly during later rainstorms and cause smaller nutrient losses. Burning is expected to partly consume the litter and duff on most of the area. Soil biota is reduced from soil heating but quickly recovers. Soil erosion would be minor since soil types are Astatula and Paola sands which have a low potential erodibility and since slopes in area proposed for burning average just 2-3%. We expect a minor loss of 3-5 lbs. /acre of nitrogen from soil leaching and between 300-350 lb./acre of nitrogen may be released as gas from slash, litter, or duff, and topsoil. Other soil nutrients are little affected. (Re to: EIS for Vegetation Management in the Coastal Plains pages IV-80 through IV-86).

Road maintenance activities proposed is re-surfacing with some reshaping existing drainage ditches. These actions prevent erosion that would occur from logging trucks hauling timber products on forest roads. Reconstruction activities occur only on existing surfaced roads. There may be some off-site movement of newly laid surfacing material within a few feet of the road but well within the road corridor. For a short period after ditch reshaping, heavy rains may cause some off-site soil movement.

Overall changes to road system would not impact soil resources.

Air: The air resource may be affected by smokefrom**prescribed burning**. Forest Service standards for optimum burning conditions would limit any adverse effect on air quality. Effects would be short-lived and directed away from major roads, airports and large populated areas. Generally, sale units adjacent to State Road 40 would not be

burned. Short-term impacts of management fires would be projected from a combination of air quality and weather monitoring to calculate emissions, smoke transport, and mixing heights. Approval from the State Department of Forestry for air quality clearance would be a standard operating procedure for these fires.

3.1.1.3. Cumulative Effects

Water and Soils: ***Cumulative effects*** from **harvesting** that occurs in adjacent and nearby stands over time will not be adverse as the quick vegetative response to harvesting is less than a year and erosion potential on these type soils is low. ***Cumulative effects*** are negligible as the amount of soil exposed by **chopping** is very small and recovery time is less than a year. Including this project, about 1500-3000 acres are chopped on the Ocala National Forest each year which represents less than 1% of the total acres on the National Forest. ***Cumulative effects*** from **burning** would not be adverse due to quick vegetative response after burning, low erosion potential of the soils, and the inherent infertility of scrub soils. Each year several hundred up to 1000 acres are burned after timber harvest on the Ocala National Forest. These areas are scattered over the 400,000-acre National Forest.

Air:Though ***cumulative effects*** could be created from the amount of **burning** done on the general forest area and on adjacent and nearby public lands, no cumulative effects are anticipated because the State regulations on smoke emissions would reduce the potential for any significant effect.

3.2Biological Environment

3.2.1 Vegetation

3.2.1.1 Affected Environment:

The spatial scale for the vegetation analysis was set as the distribution of the scrub ecosystem on the ONF. The temporal scale was set at 10 years, because that is roughly when sand pine canopy closure begins.
The sand pine scrub ecosystem is described in the FEIS (pp. 3-15 through 3-65), the BE for the LRMP (FEIS, Appendix F), and in the 2015 Landscape Scale Assessment (project website at http://www.fs.usda.gov/project/?project=48815).
Cogon grass, natal grass, Caesarweed, and Japanese climbing fern are some of the non-native invasive plant species (NNIS) that are present in the project area, and would be treated prior to timber harvest. Design feature 8would minimize the potential for introduction and spread of NNIS species.

Four federally listed plant species (Florida bonamia, Lewton's polygala, scrub buckwheat, and scrub pigeon wings) are known to occur or may occur in the project area. Nine sensitive plant species are associated with scrub habitator pond margin/prairie wetlands and therefore are likely to occur in the project area. Note that Amendment #10 modified the list of management indicator plant species (MIS) for the Ocala National Forest.

3.2.1.2 Direct and Indirect Effects of Alternative 1 - Proposed Action

Vegetation – General
By **timber harvesting**, **roller drum chopping**, and **prescribed burning** in older sand pine and scrub oak areas, the Proposed Action would create51 openings totaling about 12,500 acres of young scrub habitat, representing about5 % of the sand pine scrub ecosystem on the ONF.Similar actions over the last 10 years have modified about 3.5% of this ecosystem forestwide. After harvest and treatments, the same composition of plant species continues to grow on the site. The changed conditions are favored by threatened and endangered plants because of the increased light levels from removal of the taller trees. Even though a few individual threatened, sensitive or endangered (TES) plantsmay be **chopped** and/or**burned**, they would be absent from older stands, because of shading by the canopy.

A. Before Harvest B. . Immediately after harvest C. 4-5 years after harvest

In Management Area 8.2**, clearcutting** is proposed as the harvest method for sand pine, because experience has shown it to be the optimum harvest method. It provides early successional habitat that is essential for most scrub endemics, both plants and animals. In addition, it is the most successful harvest method to support both artificial and natural regeneration in the sand pine scrub.**Artificial regeneration**by seeding is more successful than natural regeneration due to the closed nature of sand pine cones, and the limited season that seedlings can germinate and survive the high soil surface temperatures of the scrub environment.

In Management Area 8.4, **clearcutting** is proposed as the harvest method to best remove sand pine and subsequently manage area as scrub oak.

Post-harvest prescribed burning(in both Management Areas) consumes woody debris and reduces the density of woody shrubs allowing better growth of other non-woody species and sand pine, though it does reduce sand pine natural regeneration. It simulates the same type of disturbance that naturally occurred on these sites from infrequent catastrophic wildfires, although prescribed fire produces a much cooler fire than a catastrophic wildfire.

Log skid trails and landings are small intensively disturbed areas, where individual TES plants may be killed. It is unlikely that this would result in adverse impacts at the local population level. Design feature 2,in Section 2.3, would reduce the risk to individual TES plants at log landings.**Post-harvest prescribed burning** would stimulate germination of TES plants by scarifying seed in the soil seed bank and releasing a flush of nutrients. Many TES plants quickly re-sprout from rootstock following a fire.Sites that are naturally regenerated without site preparation would initially have more scrub oaks than areas that are artificially regenerated. Scrub oaks and sand pines compete with TES plants for space, light, and nutrients. Due to the effects of **roller chopping**, artificially regenerated openingswould provide more sandy patches and have less woody debris than naturally regenerated sites.

Vegetation would not be affected by **road maintenance**because vegetation is not normally present in the roadway.**Decommissioning activities** would have no effect on vegetation as the roadway itself has little or no vegetation present. Roadwork and decommissioning activities would be within existing roadbeds. If non-native invasive species (NNIS) are present, the risk of further spread as a result of maintenance blading or ditch re-shaping is high. Any new or existing NNIS occurrence would receive a control treatment as soon as it is detected. Forest Service roads are surveyed annually for NNIS.

Plant communities would be protected in a variety of ways by standards & guidelines, design features, and monitoring. Based on many years of experience with similar actions on similar sites, the long-term beneficial effects that result from the establishment of young scrub openings greatly outweigh the short-term disturbance of vegetation being mechanically harvested, chopped and/or burned.

Vegetation – Federally Endangered or Threatened Species

The Biological Assessment (BA) for the North 40 Scrub Project is on the project website. This document provides analyses of the potential effects of the proposed action on Federally listed (threatened and endangered) wildlife and plant species. Please consult the BA for information on the potential effects of this project on threatened and endangered plant species.

This assessment determined that proposed actions may adversely affectthe federally listed endangered and threatened plant species that occur or are likely to occur in the project area: Florida bonamia, scrub buckwheat, Lewton's polygala, and scrub pigeon wings.This effect determination simply parallels the "may [adversely] effect" determination in the 1999 LRMP and amended Biological Opinion for the scrub pigeon wings.The Biological Opinion for the 1999 LRMP determined that "implementation of the [Revised LRMP] is not likely to jeopardize the continued existence of any of the 11 species identified".All activitiesin this proposed alternative are also analyzed in the LRMP and are covered under the Biological Opinion for the LRMP.

It is highly unlikely that **harvest** operations would affect these species because they occur in open conditions and would not be likely to occur in mature sand pine stands. Florida Bonamia can occur in mature sand pine stands, but the species is known to reappear following disturbance and would not be negatively impacted by harvest operations. Any negative effects on these species stem from the potential for a limited number of individuals to be killed by **roller-drum choppers**during chopping operations.However, all these species have adaptations (e.g., deep woody taproots and rhizomes) that limit that impact of physical disturbance. Only a "direct hit" would threaten species such as scrub buckwheat or scrub pigeon wings, and individual mortality from such encounters would not be expected toremotely threaten even the local populations of these plants.Short-term (10-15 years) indirect effects from **harvesting** and the removal of a sand pine overstory would indirectly benefit all three species by increasing sunlight penetration to the ground and creating an open environment with large patches of bare ground. Over the long-term, canopy closure of sand pine in stands seeded with sand pine would decrease habitat quality in general. Stands managed as early successional scrub would provide long-term habitat quality, primarily by maintaining an open canopy and scattered, sandy openings.
Roller-chopping would promote bare ground openings by decreasing coarse woody debris. **Prescribed burning** would create openings and stimulate flowering and germination.

Vegetation – Sensitive Species
The sensitive species associated with sand pine scrub habitat are herbaceous/ground cover or shade-intolerant understory plants that require open habitat conditions (e.g., lack of a canopy, scattered areas of bare sand). Therefore it is unlikely that harvest operations would impose significant direct impacts on these species since it is unlikely that they would occur under mature sand pine areas, which have developed canopies. **Roller-chopping** and prescribed burning present some risk of direct impact to scrub-associated sensitive species, but most scrub endemic species possess a hardy bulb or other underground root structure that allow the plants to resprout after disturbance. **Roller-chopping** and **prescribed burning** would reduce the coarse woody debris left behind by harvest operations, creating open conditions. **Prescribed burns** of moderate intensity would create a flush of nutrients for plants. **Timber harvest** following by **prescribed burning** and a rain event could cause minor erosion in some areas with leaching of nutrients. Burning would likely increase germination and stimulate re-sprouting and growth in fire-adapted sensitive species.**Reforestation** activities would be unlikely to cause any direct impacts because the process creates very minor physical disturbance, and the scrub-adapted species and colonizing plants are adapted to disturbance. **Road work** performed for support of harvest operations may introduce some risk of direct impacts to individual plants occurring near road edges being pushed or trampled during roadwork. Previously closed roads that will be opened will experience increased disturbance. Areas maintained as

This assessment determined that for the nine scrub-associated species the proposed action "may impact individuals but would not be likely to result in a trend towards federal listing or loss of viability". The proposed treatments present only a limited amount of risk of direct impacts to individual plants, much less pose any risk to the greater localized populations of these sensitive species. Indirect impacts are mostly beneficial and any negative effects are attributed to natural successional changes. Over the long term and landscape-level, management will provide a variety of age classes within sand pine scrub habitat.The Biological Evaluation for Regional Forester's Sensitive Species is available on the project website.

3.2.1.3 Cumulative Effects

Cumulative effects from **harvesting**, **chopping**,**burning**, **seeding**sand pine come from similar actions being carried out in adjacent compartments and in different years. The harvesting and supporting road work planned in this EA represents the amount of timber harvesting, chopping, and seeding that usually occurs on in three to fouryears on the ONF. Similar actions are being carried out on other parts of the Forest in preceding and subsequent years. All of these actions make up the cumulative effects for treatments. Though there have been no long-term studies about the effects of harvesting and related actions in the scrub at this scale,the ONF has been using this type of management in sand pine scrub since the 1950's. Botanical surveys and ecological inventories done in recent years have found the same species composition and abundance as had been found in earlier surveys. Several TES species are common and even abundant on the ONF. It does not appear that any negative cumulative effects to plant species has occurred or would occur from the proposed action. If the amount of early successional scrub increases over time, scrub endemic plants would cumulatively benefit from decreased distances between metapopulations and possible subsequent increases in genetic diversity.

3.2.2 Wildlife

3.2.2.1 Affected Environment:

The analysis area for this project is primarily sand pine scrub. Wildlife communities and habitat are described in the FEIS for the 1999 Revised LRMP (pp. 3-66 through 3-98).

The affected environment is described in the 2015 scrub Landscape Scale Assessment and the BE for the LRMP (FEIS, Appendix F). Three federally listed threatened species (Florida Scrub-Jay, Eastern Indigo Snake, and Sand Skink) occur or are likely to occur in the project area. Eight sensitive species (Florida Mouse, Florida pine snake, Sherman's Fox Squirrel, Florida Black Bear, Gopher Tortoise, Scrub Lizard, Short-Tailed Snake, and Striped Newt) occur or are likely to occur in the project area. Two Management Indicator Species (MIS; Florida Scrub-Jay and Scrub Lizard) occur within the project area. Note that Amendment #10 reduced the list of MIS wildlife species for the Ocala National Forest. Also see the 2013 Monitoring and Evaluation Report for population and trend data on MIS (available at: http://www.fs.usda.gov/detail/florida/landmanagement/planning/?cid=stelprdb5269795).

3.2.2.2 Direct and Indirect Effects of Alternative 1 - Proposed Action

The Proposed Action would move 113 stands of sand pine or scrub oak into 51 openings of young habitat, representing about 5 % of the sand pine scrub ecosystem on the ONF. Similar actions over the last 10 years have modified about 3.5% of this ecosystem.

General Wildlife Effects:

The main effects on wildlife would result from changes in successional stage within the scrub. Immediately following sand pine **harvest**, the pine seeds that are exposed would provide food for small mammals and ground-foraging birds, such as quail, turkey, and dove. Within a year after project completion the sites would provide browse plants and soft mast. After two years the sites would also provide highly abundant, seasonally persistent hard mast to benefit herbivorous and omnivorous wildlife species. As oak height increases, the scrub would be valued as bedding sites by deer and nesting sites for shrub-dwelling birds such as common yellowthroats. Young scrub, whether seeded with sand pine or managed as early successional scrub, would provide quality habitat for wintering migrant birds such as the palm warber and yellow-rumped warbler.Harvest areas would provide herpetofauna that require early successional scrub with habitat from 1-2 years after project completion, until reduction of basking sites from increasing tree growth forces them to relocate (about 5-10 years).

Immediately after harvest, removal of mature sand pine forest would reduce nesting and foraging habitat for some species of migratory birds, such as great-crested flycatchers, American robins, and yellow-rumped warblers, but would increase nesting and foraging for other species, such as ovenbirds and southeastern kestrels. Southeastern kestrels and screech owls would move to the 1-year old clearcuts and occupy it until thick vegetation made obtaining prey difficult (about 5 years). Regeneration areas of the ONF provide important nesting habitat for the southeastern kestrel in stands where nesting cavities or nesting boxes are available. Forest Plan S&Gs WA-1 and WA-2 would protect wildlife habitat next to ponds and lakes.The standard practices of snag retention in clearcuts alleviate some of the impacts of tree removal on cavity nesting birds.

Areas maintained as early successional scrub would provide a steady source of hard mast for various wildlife species in the form of acorns from a suite of scrub oak species. Such areas would provide suitable habitat for gopher tortoises and the many species that use their burrows for escape cover or in which to place their own burrows (such as the Florida mouse). Early successional scrub would also provide high quality habitat for rodents such as the Florida mouse and the various snake species that prey on rodents such as the eastern coachwhip, eastern indigo snake, and eastern diamondback rattlesnake. Lizard and skink species would also benefit from the open canopy and scattered bare ground in this habitat.

Management Indicator Species (MIS):
Effects on the Florida Scrub-Jay, which is also a Federally listed Threatened Species, are discussed in detail in the Biological Assessment. Effects on the scrub lizard, which is also a Sensitive Species, are discussed in detail in the Biological Evaluation.

Federally Listed Threatened and Endangered Species (TES): Effects on Threatened and Endangered species are discussed in detail in the Biological Assessment (BA). The BA determinations for federally listed species are: *likely to adversely affect* theFlorida Scrub-Jay, Eastern Indigo Snake, and Sand Skink. Again, these determinations simply reflect the determinations reached in the 1999 LRMP, which were determined in the subsequent Biological Opinion to not be likely to jeopardize the continued existence of these species. For a detailed look at how this project could potentially affect these three species, please consult the Biological Assessment.

Regional Forester's Sensitive Species: Effects on Regional Forester's Sensitive Species are discussed in detail in the Biological Evaluation (BE). The BE determinations for sensitive species are: *may impact individuals but would not be likely to result in a trend towards federal listing or loss of viability* for the Florida mouse, Sherman's fox squirrel, Florida black bear, gopher tortoise, Florida pine snake, scrub lizard, short-tailed snake, and striped newt. For a detailed look at how this project could potentially affect these three species, please consult the Biological Evaluation.

Road maintenancewould have no effect on wildlife as the road work would be within existing roadbeds. **Road decommissioning** would benefit wildlife by reducing access by humans.

3.2.2.3 Cumulative Effects

Cumulative effects from **harvesting**, **chopping**,**burning**, **seeding**sand pine come from similar actions being carried out in adjacent compartments and in different years. The harvesting and supporting road work planned in this EA represents the amount of timber harvesting, chopping, and seeding that usually occurs on in two to three years on the ONF. Similar actions are being carried out on other parts of the Forest in preceding and subsequent years. All of these actions make up the cumulative effects for treatments. Though there have been no long-term studies about the effects of harvesting and related actions in the scrub at this scale,the ONF has been using this type of management in sand pine scrub since the 1950's. It does not appear that any negative cumulative effects to wildlife species has occurred or would occur from the proposed action.Based on many years of experience with similar actions on similar sites, the long-term beneficial effects on TES wildlife that would result from the establishment of early successional scrub habitat would greatly outweigh any short-term adverse effects from disturbance, displacement or mortality.

3.3 Social Environment

3.3.1 Recreation

3.3.1.1 Affected Environment

Recreation resources located adjacent to proposed treatment areas include hiking trails (Florida National Scenic Trail and Salt Springs Trail) OHV Trails, and Horse Trail (LAM Trail). Other recreation activity in the Project Area is hunting as part of the Ocala National Forest Game Management Area.

3.3.1.2 Direct and Indirect Effects for Proposed Action

Recreation would be temporarily affected by the activities of the proposed action. Recreation activities associated with the project areas include hiking, horseback riding, OHV riding, and hunting. These activities would be temporarily interrupted during project implementation in the treatment areas due to noise from heavy equipment from **clearcutting**, **roller chopping**, **seeding**, and **road maintenance** activities. Project Design Criteria # 12 and 13,in Section 2.3, would lessen the effects for trail riding or hiking. It is expected that the treatment of each stand would be accomplished in thirty days or less and all areas would be treated over a period of five years. Treatment would generally occur during the week when visitation rates are lower. Other trailsand camping opportunities on the ONF would not be interrupted during project implementation. **Road Decommissioning** activities would range from blocking road entrances to scattering logging slash to reshaping natural contours. Effects would be short term, 3-6 months, and the long term effect would be positive as the forest takes on a more natural appearance after the roads become obliterated. Most all of the roads to be decommissioned are Level 1, Closed Roads, so there would be only a slight impact from prior recreational use of these roads. Most of the Level 2, Open to the Public, roads selected for decommissioning were not being used and had already started to grow over with vegetation.

3.3.1.3 Cumulative Effects

There are no other known activities that would affect recreation during the treatment period that would have combined effects with the proposed action. There should be no cumulative effects to recreational activities associated with the project implementation. All recreational activities may resume following treatment of each stand.

3.3.2 Human Health and Safety

This section discusses the health and safety effects related to recreational users in the area at the time of project implementation and to workers carrying out the treatments.

3.3.2.1 Direct and Indirect Effects for Proposed Action

Vehicle and heavy equipment use pose the only hazards to public safety. Visitors would be affected by increased vehicle use on forest roads during harvesting and other treatments. OHV riders may be impacted by harvesting and other treatments on areas next to project areas. These hazards are mitigated by project design criteria (13) in section 2.3, timber sale and contract specifications for safety, and state traffic laws.

Project personnel would be aware of increased vehicle use on forest roads during harvesting and other treatments. Forest Service employee safety programs address defensive driving and road hazards regularly.

3.3.2.2 Cumulative Effects

Activities occurring on the ONF increasingly involve motorized vehicles and equipment. Though driving hazards are ever present on the ONF, any additional vehicle activity would havea cumulative effect to human health and safety.

There are no other activities that would have a combined effect on public health. Overall cumulative adverse effects to human health and safety associated by project activities would be small.

3.3.3 Environmental Justice and the Protection of Children

The proposed action was assessed to determine whether it would disproportionately impact minority or low-income populations (in accordance with Executive Order 12898) from environmental and health hazards.It generally applies to actions that could cause soil, water or air pollution or actions concerning hazardous or animal waste disposal, or chemical application and storage. Proposed actions for this project would not cause or propose any of these.
The percent of minority and low-income populations in Marion County (11.8 and 13.6 percent, respectively) is less than or similar to the State of Florida (16 and 11.7 percent, respectively) based on 2000 census data. This

demographic information indicates that this county does not qualify as an environmental justice community. Therefore, no further analysis is required.

3.3.4 Economic Effects
3.3.4.1 Affected Environment

The socioeconomic environment is described in the FEIS for the 1999 Revised LRMP (pp. 3-189 through 3-225). The spatial scale for the economic analysis was set as Marion and Lake Counties, becausethe Proposed Action would result in tangible benefits mostly to companies and individuals in those areas.The temporal scale was set at three years following harvest, because the actions that affect economics would generally take place within that period.

3.3.4.2 Direct and Indirect Effects for Alternative 1

A financial efficiency analysis of the action alternatives is summarized below. This analysis compared estimated expenditures with financial returns, and followed guidelines in the Forest Service Timber Sale Preparation Handbook (FSH 2409.18_30).

Table9. Summary of Financial Efficiency Analysis - Alternative 1

Benefit/Cost Category	Discounted Short-TermExisting Stand	Discounted Long-TermRegeneration Stand	BothStands
REVENUE			
Timber Sales	3360406	937301	4,297,707
TOTAL REVENUES	3360406	937301	4,297,707
FINANCIAL COSTS			
Analysis (NEPA)	32763	5374	38,137
Other Resource Support	32763	7955	40,718
Sale Preparation	194157	57772	251,929
Sale Administration	224027	57772	281,799
Road Work			
Reforestation	1160076	276057	1,436,133
Scrub-jay habitat work	252000		
TOTAL COSTS			
Financial PresentNet Value			
Benefit/Cost Ratio			

Alternative 1would contribute beneficial effects from revenues and payments to contractors, but would not measurably change employment, income or population in and around the ONF. Full analysis is shown in Appendix E. Based on many years of experience with similar actions, no adverse effects on the socioeconomic environment are anticipated.

3.3.5 Heritage Resources
3.3.5.1 Affected Environment

The sand pine scrub environment is considered the very lowest potential for archeological or historical sites on the ONF. This is primarily due to the extremely arid conditions of this environment. The stands proposed for this project are primarily located within the desert-like conditions of the deep sand pine scrub ecosystem of the ONF. Spatial and temporal effects scales were not established for the heritage resource, because no direct or indirect effects are anticipated. Heritage resources are described in the FEIS (pp. 3-101 through 3-105).

Survey of heritage resources in the project area by the Ocala National Forest archeologist was completed. Findings will be located in a FY-16 Heritage Resources report prepared by the Ocala Archeologist and is administratively confidential. During the heritage resource survey, heritage resources sites were identified.Heritage resources identified and deemed significant enough for potential inclusion in the National Register of Historic Places would be avoided during project implementation. The State Historic Preservation Officer and the Tribal Historic Preservation Officers reviewed the proposed project to determine if there would be a negative effect on heritage resources.

CHAPTER 4

4.0 CONSULTATION AND COORDINATION

Consultation and Coordination

The Forest Service consulted the following individuals, Federal, State, and local agencies, tribes and non-Forest Service persons during the development of this environmental assessment:

Federal, State and Local Agencies
Jimmy Conner, FWC, Palatka, FL
Wade Brenner, FWC, Palatka, FL
Mounir Bouyounes, Marion County Administration, Ocala, FL
Ralph Perkins, Florida DEP, Div. of Recreation and Parks, Tallahassee, FL
Deborah Furrow, FWC
Shannon Wright, FWC, Ocala, FL
Matt Trager, Forest Planner, NFF
Troy Weaver, Florida Gas Transmisión Company, Salt Springs, FL
Jeff Glen, Florida Trails Association, Tallahassee, FL
Florida Trail Association Headquarters, Gainesville, FL
Lake County Board of Commissioners, Tavares, FL
Marion Country Board of Commissioners, Ocala, FL
Putnam County Board of Commissioners, Palatka, FL
U.S. Fish & Wildlife Service Biologist, Jacksonville, FL
Amy Jenkins, Florida Natural Areas Inventory, Tallahassee, FL
Dan Hipes, Florida Natural Areas Inventory, Tallahassee, Fl
Tribes
Tarpie Yargee, Chief, Alabama-Quassarte Tribal Town, Wetumka, OK
Jeremiah Hobia, Town King, Kialegee Tribal Town, Wetumka, OK
Colley Billie, Chairman, Miccosukee Indian Tribe, Miami, FL
James R. Floyd, Principal Chief, Muscogee (Creek) Nation, Okmulgee, OK
Stephanie A. Bryan, Chairman, Poarch Band of Creek Indians, Atmore, AL
James E. Billie, Chairman, Seminole Tribe of Florida, Hollywood, FL
Dr. Paul N. Backhouse, Tribal Historic Preservation Officer, Seminole Tribe of Florida, Clewiston, FL
Organizations and Individuals
Bo Laws, Fort McCoy, FL
Chuck Sellars, Flatwoods Products, Leesburg, FL
Great South Timber and Lumber Inc.
Jim and Mary Lee Collier, Fort McCoy, FL
Jim Beeler, Clay Electric, Salt Springs, FL
Jimmy VanWagner, VanWagner Timber Inc., Citra, FL
Karen Ahlers, Florida Defenders of the Environment
Kathryn Clapp, Alford Timber, Inc./A&H Excavation, Inc., Palatka, FL
Mike Richards, Great South Timber and Lumber, Inc., Lake City, FL
Nick Krupa, Astor, FL
Robin Lewis, Save Our Big Scrub, Inc., Salt Springs, FL
Russ Hannon, Great South Timber and Lumber Inc., Lake City, FL
William F. Sloup, Orange City, FL
Walton Pellicer, Palatka, FL
Guy Marwick, Silver Springs, FL
Dick Artley, Grangeville, ID

CHAPTER 5

5.0 LIST OF PREPARERS

CORE MEMBERS:
Janet Hinchee – Silviculture and Team Leader, Ocala NF
Jay Garcia – Wildlife Biology, Ocala NF
Steve Cromer – Engineering, Ocala NF
ADDITIONAL MEMBERS:
Ray Willis, Archeologist, Ocala NF
Gordon Horsley, Timber Management, Ocala NF
Jared Nobles, NEPA Coordinator/ Forester, Ocala NF

Appendix A – Relevant Forestwide Goals and Objectives

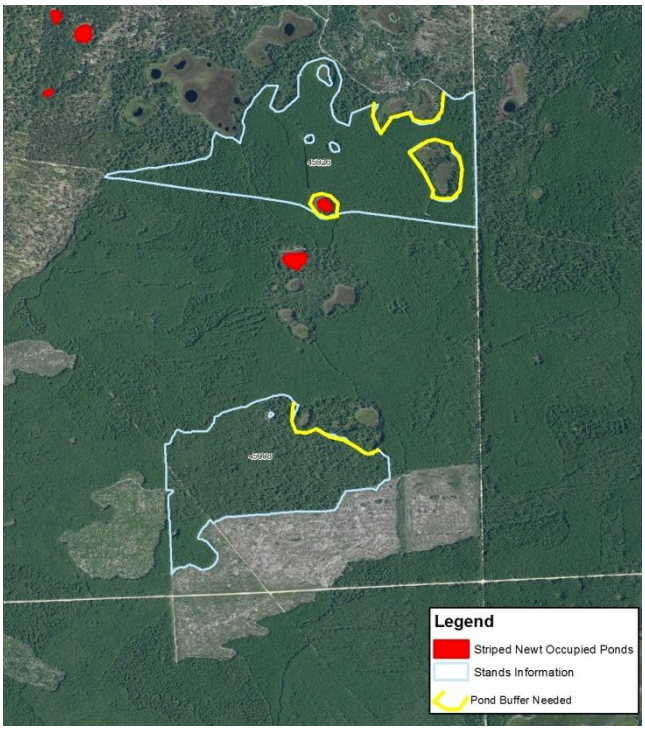
- Goal: Reduce hazardous fuels to lower the risks of catastrophic wildfire to people and communities, while mimicing the effects of fire on the ecosystem in support of the National Fire Plan.
- Goal: Increase the average opening size in the sand pine scrub ecosystem to increase scrub-jay occupancy, and better mimic natural disturbance processes that perpetuate rare and endemic plant and animal species in support of Forest Plan MA Standard and Guideline (S&G) 8.2-3 (LRMP, p. 4-47).
- MA 8.2 Goal: To produce pine pulpwood under conditions that balance efficient timber production practices with practices that promote the growth and perpetuation of species native to the Big Scrub area within the ONF. To provide a wide range of opportunities for people to use and experience the forest (LRMP, p. 4-46).
  MA 8.4 Goal: To provide conditions favorable to perpetuate Florida scrub-jay and other species that require young oak scrub and inhabit the Big Scrub area within the Ocala NF.
- Forest-wide Goal 5: Contribute to the social and economic well-being of local communities by promoting sustainable use of renewable natural resources and participating in efforts to devise creative solutions for economic health (LRMP, p. 2-3).
- Forest-wide Goal 6: Maintain or, where necessary, restore ecosystem composition, structure, and function within the natural range of variability in all ecosystems, with emphasis on longleaf pine-wiregrass, sand pine-oak scrub, pine flatwoods, hardwood/cypress, oak hammock ecosystems, and other imperiled specialized communities (LRMP, p. 2-3).
- Forest-wide Goal 8: Conserve and protect important elements of diversity - such as endangered and threatened species habitat, declining natural communities, and uncommon biological, ecological, or geological sites (LRMP, p. 2-4).
- Forest-wide Goal 9: Manage for habitat conditions to recover and sustain viable populations of all native species, with special emphasis on rare species (LRMP, p. 2-4).
- Forest-wide Goal 10: Apply prescribed burning technology as a primary tool for restoring fire's historic role in ecosystems (LRMP, p. 2-4).
- Forest-wide Objective 9:Maintain a dynamic system of at least 45,000 to 55,000 acres of habitat capable of supporting scrub-jays Forest-wide on the ONF. The 10-year population objective is 742 to 907 groups (LRMP, p. 2-5).
- Forest-wide Objective 19: Regenerate between 39,000 and 41,000 acres of sand pine on the ONF (LRMP, p. 2-6).
- Forest-wide Objective 21: Provide the following habitat conditions in the next 10 years (LRMP Table 2.2, p. 2-7).

Appendix B – Ponds to Protect

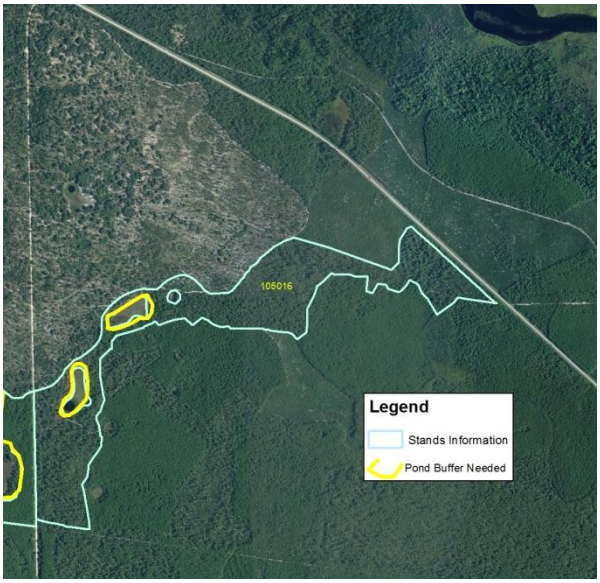
Water Resource Protection for Affected Stands (refer to Project Design Criteria # 1)

Cmpt/Stand	Treatment Planned	Protection Planned
C45st8 and 26	Clearcut, burn	No harvest 35’ from pond edge from ponds >2 acres
C105st16	Clearcut, burn	No harvest 35’ from pond edge from ponds >2 acres

C45 pond buffers



C105 pond buffers



Appendix C -- Public Involvement

Notice of opportunity to comment

North 40 Scrub Management Project
USDA Forest Service
National Forests in Florida – Ocala National Forest

The Forest Service requests public comments on a Draft Environmental Assessment (EA) prepared for the North 40 Scrub Management Project on the Ocala National Forest in Lake and Marion Counties, FL. Proposed activities include:Creating about 12,500 acres of habitat for the Florida scrub-jay through timber sales, mechanical treatments, and prescribed burning. Activities would include commercial harvesting sand pine and crooked wood, road reconstruction and maintenance, mechanical treatments, prescribed burning, and seeding sand pine. Restoring longleaf pine and native groundcover to about 90 acres within the OHV Administrative Site (formerly a sand pine seed orchard for genetically improved stock) and at another old sand pine seed orchard. The EA is available on the project website at http://www.fs.usda.gov/project/?project=48815 or upon request (contact Jared Nobles, jarednobles@fs.fed.us, 352-625-2520).

Pursuant to 36 CFR 218 subparts A and B, the Forest Service is seeking comments on this proposal. Carl Bauer, District Ranger, is the responsible official for this project. Comments must be postmarked or received within 30 days beginning the day after publication of this legal notice. Oral or hand-delivered comments must be received within normal business hours of 7:30am to 4:00pm Monday to Friday, closed on Federal holidays. Comments may be mailed electronically, in common digital format, to comments-southern-florida-lakegeorge@fs.fed.us. Only those who submit timely and specific written comments regarding the proposed project will be eligible to file an objection §218.24(b)(6). The content of comments, including the names and addresses of commenters, will be part of the public record for this project.

Your comments should contain the following: 1) Name, address, and (if possible) telephone number; 2) Title of the proposal on which comment is being submitted (i.e., "North 40 Scrub Management Project"; 3) Specific facts or comments along with supporting reasons that you believe the Responsible Official should consider in reaching the decision. Comments can also be mailed to the District Ranger Carl Bauer, Ocala National Forest, 17147 E. Hwy 40 Silver Springs, FL 34488. For more information on this proposal contact Jared Nobles at (352) 625-2520 ext. 2512.

Appendix D – Scrub Harvest Size, Opening Size and Age Distribution

Table 8. Trend Analysis of Scrub Harvest Size on the Ocala National Forest

Decision	Project	Scrub Acreage	Number Stands	Number Harvest Units	Average Harvest Size (ac.)	Range of Harvest Size (ac.)	Number Units 100 to 149ac.	Number Units ≥ 150 ac.
9/1999	Eco. Mgt. Sand Pine Scrub	2,409	60	54	44.6	13 to 137	1	0
5/2003	Scrub-jay 02-00-02	4,941	97	84	58.8	7 to 160	10	2
11/2004	Hurricane Salvage (some Seminole RD areas)	3,257	72	61	53.4	7 to 201	4	3
2/2007	Scrub-jay FY-2004	2,199	37	33	66.6	14 to 160	7	1
9/2008	Scrub-jay Pipeline	3,087	44	37	83.4	15 to 157	6	7
10/2009	South Ocala Scrub	2,476	31	22	105	15 to 282	3	6
4/2011	Hog Valley Scrub	3,037	25	19	142.7	31 to 289	3	10
3/2013	19&40 – Alt. 1	5,439	59	38	140	21 to 634	4	11
7/2014	Central Scrub–ALT 2	6,331	52	41	150	24 to 584	6	18
	North 40 Scrub	9,254	73	54	173	7 to 615	6	27

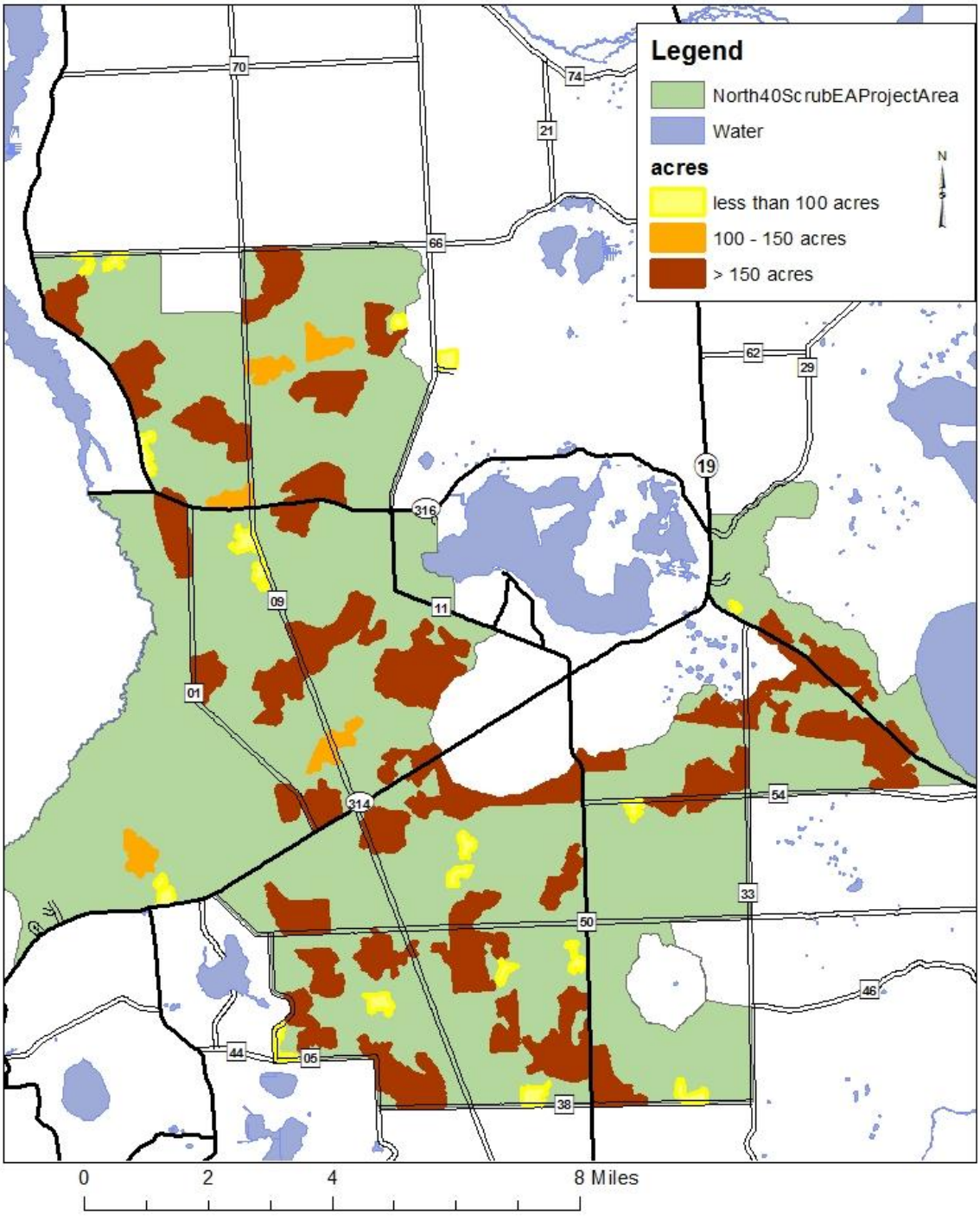
Harvest Unit = the contiguous area being harvested at one time

From Amendment #8, LMRP – "Research by Forest Service biologists and consultation with other scrub-jay experts indicates that smaller openings originally prescribed by the LMRP may be causing unnecessary fragmentation of the scrub-jay landscape. By increasing the maximum allowable size of openings to 800 acres and encouraging the connectivity of nearby units, we can increase the number of scrub-jay territories and also provide habitat for species with smaller home ranges that make use of even earlier seral stages than do the scrub-jays such as the sand skink and the scrub lizard."

Table 9. Trend Analysis of Scrub Opening Size on the Ocala National Forest								
Decision	**Project**	**Scrub Acreage**	**Number Stands**	**Number Openings**	**Average Opening Size (ac.)**	**Range of Opening Size (ac.)**	**Number Openings 100 to 149ac.**	**Number Openings ≥ 150 ac.**
10/2009	South Ocala Scrub	2,476	31	22	105	15 to 282	3	6
4/2011	Hog Valley Scrub	3,440	36	21	213	33 to 435	3	16
3/2013	19&40 – Alt. 1	5,649	59	32	170	23 to 700	2	12
7/2014	Central Scrub-ALT 2	6,499	52	33	258	32 to 649	5	21
	North 40 Scrub	13,396	112	48	263	36 to 764	4	27

Opening = the contiguous scrub area less than six years old. May include several stands of different ages as long as they are less than 6 years.

Openings Created by Proposed Actions



Forestwide Objective #21 describes the desired age class distribution for sand pine:

Forest Type	0-10 years	11-30 years	31-50 years	> 50 years
% Sand Pine	20	45	25	10

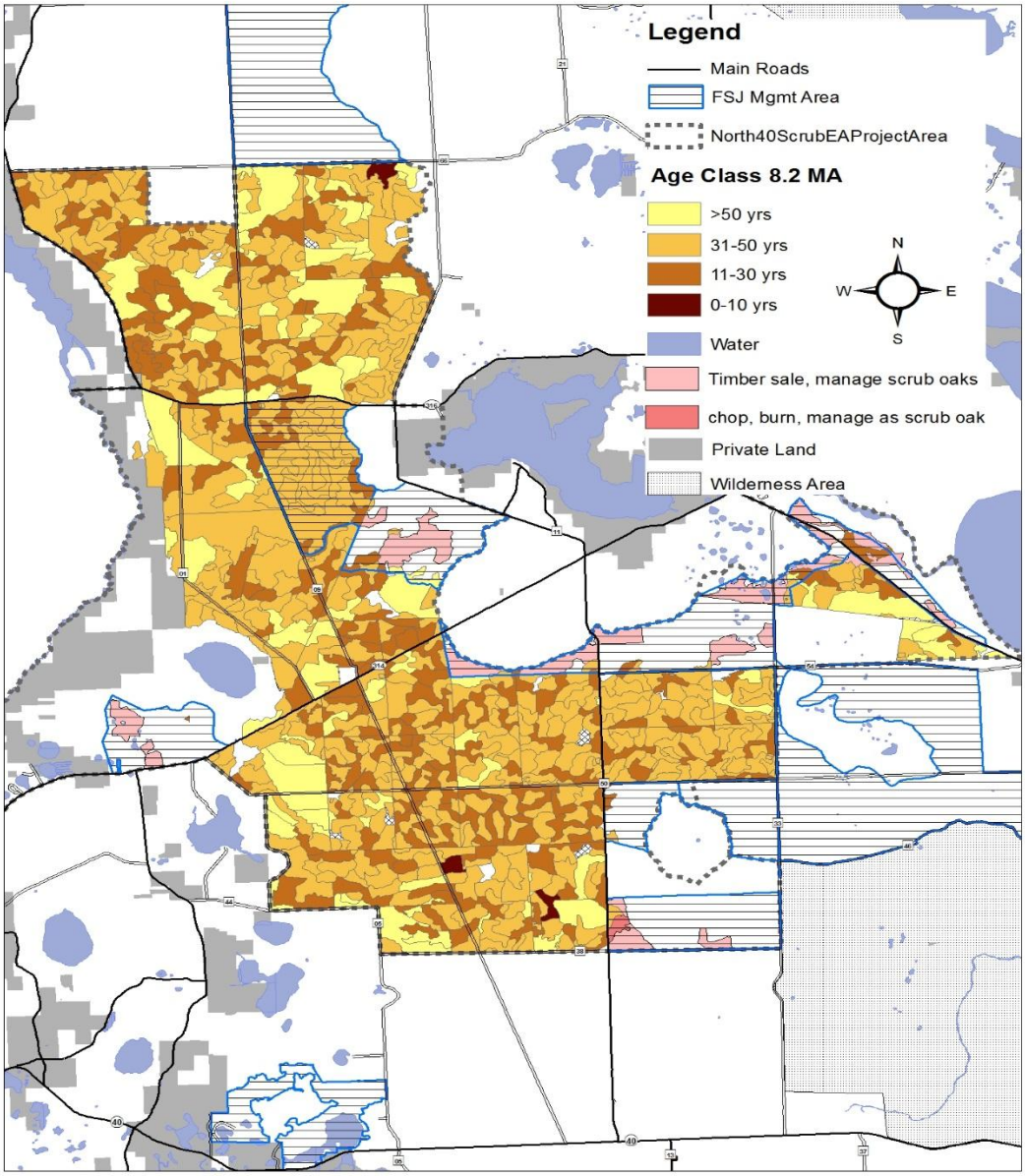
The current age class distribution for sand pine within 8.2 Management Area in the analysis area is:

Forest Type	0-10 years	11-30 years	31-50 years	> 50 years
% Sand Pine	9	43	39	9

If the Proposed Action is implemented the age class distribution of sand pine within the analysis area would move toward the desired future condition and a few years after implementation in 2024,the age class distribution would be:

Year	Forest Type	0-10 years	11-30 years	31-50 years	> 50 years
2019	% Sand Pine	23	28	45	4
2024	% Sand Pine	20	22	50	8

Figure 2. Age Class Distribution in 2024 for 8.2 Management Area within Project Area



Appendix E. Economic Analysis

ALT 2: Central Scrub									
Short-term-existing stand	Year	Volume	Acres	Miles	$/vol. unit	$/acre	$/mile	Undiscounted Discounted	Discounted
Revenues:									
timber sale (CCF)	3	64653			40			2586120	2299051
TOTAL REVENUES(PV)									2299051
Financial Costs:									
Analysis and documentation	0		6423			3		19269	19269
other resource support	0		6423			3		19269	19269
Sale Prep (CCF)	2	64653			2.5			161632.5	149438
Harvest Admin (CCF)	3	64653			3			193959	172429
Road design & reconstruction	3			14.9			34300	511070	454339
Road maintenance	3			40			1900	76000	67564
Reforestation - sand pine	5		4457			195		869115	714349
TOTAL COSTS (PV)								1850314.5	1596657
Financial Present Net Value									702394
Benefit/Cost Ratio									1.44

Long-term-regen. stand	Year	Volume	Acres	Miles	$/vol. unit	$/acre	$/mile	Undiscounted Discounted	Discounted
Revenues:									
timber sale (CCF)	40	54132	0	0	40			2165280	451004
TOTAL REVENUES(PV)									451004
Financial Costs:									
Analysis and documentation	40		4511			3		13533	2819
other resource support	30		4511			3		13533	4172
Sale Prep (CCF)	42	54132			3			162396	31273
Harvest Admin (CCF)	42	54132			3			162396	31273
Reforestation	46		4511			195		879645	144802
Road Costs	42			15			25000	375000	72216
TOTAL COSTS (PV)								1231503	286555
Financial Present Net Value									164449
Benefit/Cost Ratio									1.57

Additional Costs-not sale related								
Analysis and documentation	0	45000		3		135000	135000
Prescribe burning	4	3979		50		198950	170063
Reforest sand pine	5	54		195		10530	8655
Administer crooked wood sales	2	6369		2		12738	11777
Hydrology Restoration	1					75,000	72115
					non-sale total	432218	397611

Appendix F: Heritage Resources Report - Summary

Management Summary: FY-16, Heritage Resources Status Report 2, North 40 Sand Pine Scrub EA, Lake George Districts, Ocala National Forest (Accession #s LKGF00458 , PALS #48815, was prepared Sept 27, 2016 by Ocala National Forest Archeologist, Ray Willis. It was submitted to Dr. Timothy Parsons, Deputy State Historic Preservation Officer for Florida on November 1, 2016 who concurred on December 2, 2016 with the finding that the proposed project has identifiedpotentially significant heritage resource sites which will be omitted from sale areas and buffered from any impact.The Seminole Tribe of Florida Tribal Historic Preservation Office sent a letter of concurrenceabout the project on November 22, 2016. As such the project will have no impact on heritage resources.

Appendix G. Listing of Compartment/Stands for Proposed Treatments

In Scrub-jay management area: (All areas managed as scrub oak after treatment)

Compartment-Stand	Total Stand Size (Acres)	Harvest Treatment (Acres)	Scrub Chop Treatment (Acres)	Burn Treatment (Acres)
C38-S8	158	102	56	158
C38-S9	36	0	36	36
C38-S29	16	0	16	16
C38-S31	435	331	104	435
C38-S46	14	0	14	14
C42-S2	450	432	18	450
C42-S5	94	0	94	94
C42-S26	46	46	46	46
C42-S34	127	0	127	127
C42-S38	147	0	147	147
C42-S44	54	0	54	54
C45-S7	52	52	0	52
C45-S8	124	124	0	124
C45-S26	167	106	61	167
C45-S37	134	0	134	134
C46-S8	116	116	0	116
C46-S13	43	0	43	43
C46-S17	42	0	42	42
C46-S41	18	0	18	18
C47-S10	240	197	43	240
C48-S9	175	159	16	175
C51-S8	140	108	32	140
C51-S19	55	0	55	55
C51-S20	58	58	58	58
C66-S17	26	0	26	26
C66-S31	246	192	54	246
C66-S36	23	0	23	23
C66-S39	15	0	15	15
C66-S50	9	0	9	9
C74-S18	34	0	34	34
C74-S26	43	0	43	43

C74-S28	64	64	64	64
Compartment-Stand	Total Stand Size (Acres)	Harvest Treatment (Acres)	Scrub Chop Treatment (Acres)	Burn Treatment (Acres)
C101-S3	40	40	0	40
C101-S8	8	8	0	8
C101-S16	14	14	0	14
C105-S4	314	213	314	314
C105-S5	273	232	217	273
C105-S34	15	0	15	15
C106-S4	42	42	42	42
Total Acres	4107	2636	2070	4107

In area to manage for sand pine:

Compartment-Stand	Total Stand Size (Acres)	Harvest Treatment (Acres)	Chop Treatment (Acres)	Optional Burn Treatment (Acres)	Seed Treatment (Acres)
C23-S4	124	104	124	124	124
C23-S27	176	176	176	176	176
C24-S3	373	373	373	373	373
C24-S22	120	49	120	0	120
C25-S11	347	334	347	347	347
C25-S12	256	175	256	256	256
C26-S4	231	231	231	231	231
C26-S10	30	0	30	0	30
C26-S11	36	0	36	0	36
C27-S3	25	0	25	0	25
C27-S8	116	116	116	116	116
C27-S9	122	122	122	122	122
C27-S25	70	0	70	70	70
C28-S21	333	311	333	333	333
C29-S3	281	202	281	281	281
C39-S6	76	0	76	0	76
C39-S10	48	0	48	0	48
C40-S8	107	107	107	107	107
C41-S2	175	175	175	175	175
C41-S13	303	261	303	303	303
C42-S42	77	77	77	77	77
C46-S12	40	40	40	40	40
C46-S18	61	61	61	61	61
C47-S4	160	131	160	160	160
C48-S3	159	159	159	159	159
C48-S4	47	47	47	47	47
C48-S8	54	54	54	54	54
C48-S23	47	47	47	47	47
C49-S1	126	126	126	126	126
C49-S3	106	39	106	106	106
C49-S17	65	0	65	0	65
C49-S34	79	0	79	0	79
C50-S1	195	195	195	195	195
C50-S4	69	69	69	69	69
C50-S9	140	124	140	140	140

Compartment-Stand	Total Stand Size (Acres)	Harvest Treatment (Acres)	Chop Treatment (Acres)	Optional Burn Treatment (Acres)	Seed Treatment (Acres)
C55-S6	302	302	302	302	302
C56-S6	47	34	47	47	47
C56-S15	176	160	176	176	176
C58-S5	59	59	59	59	59
C58-S6	46	46	46	46	46
C58-S10	78	78	78	78	78
C58-S15	36	36	36	36	36
C58-S25	36	36	36	36	36
C66-S14	73	73	73	73	73
C66-S15	403	332	403	403	403
C67-S3	168	168	168	168	168
C67-S45	427	333	427	427	427
C68-S20	215	215	215	215	215
C68-S23	65	0	65	65	65
C68-S25	48	48	48	48	48
C68-S31	150	150	150	150	150
C68-S42	55	0	55	55	55
C68-S46	69	0	69	69	69
C97-S2	308	308	308	308	308
C105-S24	48	48	48	48	48
C105-C30	326	326	326	326	326
C106-S14	247	247	247	247	247
Total Acres	8156	6904	8156	7629	8156